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Thr	Arg	Val	Pro	Ser	Asp	Ser	Ala	Ile	Thr	Tyr	Arg	Gly	Ser	Ile	Thr
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Glu	Ser	Gln	Pro	Ser</											

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Thr His Thr Asp Val Gly Leu Leu Glu Tyr Gln His His Ser Arg Asp	
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Tyr Ala Ser His Leu Ser Pro Gly Ser Ile Ile Gln Pro Gln Arg Arg	
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Arg Pro Ser Leu Leu Ser Glu Phe Gln Pro Gly Asn Glu Arg Ser Gln	
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Lys Ser Glu Met Glu Phe Ile Glu Ser Lys Arg Pro Arg Leu Glu Leu	
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Leu Pro Asp Pro Leu Leu Arg Pro Ser Pro Leu Leu Ala Thr Gly Gln	
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Leu Lys Lys Lys Gln Gln Gln Leu Glu Glu Glu Ala Ala Lys Pro Pro	
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gcc Ala	gac Asp	ccc Pro	atg Met	aag Lys	gtg Val	tac Tyr	aaa Lys	gac Asp	cgc Arg	cag Gln	gtc Val	atg Met	aac Asn	atg Met	tgg Trp	1297
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Ser Gly Pro Ala Thr Val Asn Asn Ser Ser Asp Thr Glu Ser Ile Pro	
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ctc	acc	ccg	act	ggc	gac	ccc	cgg	gcc	aat	gcc	tca	ccc	cag	aag	cca	2881
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Lys	Pro	Ala	Pro	Pro	Ala	Pro	Pro	Pro	Pro	Gln	Asn	Leu	Gln	Pro	Glu	
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Thr	His	Thr 35	Asp	Val	Gly	Leu	Leu 40	Glu	Tyr	Gln	His	His 45	Ser	Arg	Asp
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Arg 65	Pro	Ser	Leu	Leu	Ser 70	Glu	Phe	Gln	Pro	Gly 75	Asn	Glu	Arg	Ser	Gln
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Arg	Gly	Lys	Ser	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	
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cag	cag	atg	gca	cgg	agc	agc	cag	gag	gag	aag	gag	gag	aag	gag	aag	2188
Gln	Gln	Met	Ala	Arg	Ser	Ser	Gln	Glu	Glu	Lys	Glu	Glu	Lys	Glu	Lys	
				510												

aag gaa gaa ctc agc aag gag aag aca gac gac act tct ggc gag gac	2284
Lys Glu Glu Leu Ser Lys Glu Lys Thr Asp Asp Thr Ser Gly Glu Asp	
540 545 550	
aac cat gag aaa gag gcc gtg gcc tcc aaa ggc cgc aaa act gcc aac	2332
Asn His Glu Lys Glu Ala Val Ala Ser Lys Gly Arg Lys Thr Ala Asn	
555 560 565	
agc caa ggc cgc cgc aaa ggc cgt atc acg cgc tcc atg gcc aac gag	2380
Ser Gln Gly Arg Arg Lys Gly Arg Ile Thr Arg Ser Met Ala Asn Glu	
570 575 580 585	
gcc aac cat gag gag aca gcc acc cca cag caa agt tca gag ctg gct	2428
Ala Asn His Glu Glu Thr Ala Thr Pro Gln Gln Ser Ser Glu Leu Ala	
590 595 600	
tcc atg gag atg aac gag agt tct cgc tgg act gag gaa gag atg gag	2476
Ser Met Glu Met Asn Glu Ser Ser Arg Trp Thr Glu Glu Glu Met Glu	
605 610 615	
aca gca aag aaa ggc ctc ctg gaa cat ggg agg aac tgg tca gcc att	2524
Thr Ala Lys Lys Gly Leu Leu Glu His Gly Arg Asn Trp Ser Ala Ile	
620 625 630	
gcc cgc atg gtg ggc tcc aag acc gtg tcc cag tgt aag aac ttc tac	2572
Ala Arg Met Val Gly Ser Lys Thr Val Ser Gln Cys Lys Asn Phe Tyr	
635 640 645	
ttc aac tac aag aag agg cag aac ctg gac gaa atc ctt cag cag cac	2620
Phe Asn Tyr Lys Lys Arg Gln Asn Leu Asp Glu Ile Leu Gln Gln His	
650 655 660 665	
aag cta aag atg gag aag gag agg aac gct cgg agg aag aag aag aag	2668
Lys Leu Lys Met Glu Lys Glu Arg Asn Ala Arg Arg Lys Lys Lys Lys	
670 675 680	
acc cca gct gcg gcg agc gag gag aca gcc ttc cca cct gcc gct gag	2716
Thr Pro Ala Ala Ala Ser Glu Glu Thr Ala Phe Pro Pro Ala Ala Glu	
685 690 695	
gac gaa gag atg gaa gca tca ggc gca agt gcc aat gag gaa gag ctg	2764
Asp Glu Glu Met Glu Ala Ser Gly Ala Ser Ala Asn Glu Glu Glu Leu	
700 705 710	
gcg gag gag gca gaa gcc tca cag gcc tct ggg aat gag gtt ccc aga	2812
Ala Glu Glu Ala Glu Ala Ser Gln Ala Ser Gly Asn Glu Val Pro Arg	
715 720 725	
gtt ggg gag tgc agt ggc cca gct gct gtc aac aac agc tct gat act	2860
Val Gly Glu Cys Ser Gly Pro Ala Ala Val Asn Asn Ser Ser Asp Thr	
730 735 740 745	
gag agt gtc cca tcc ccg cgt tca gaa gcc atg aag gac act ggg cct	2908
Glu Ser Val Pro Ser Pro Arg Ser Glu Ala Met Lys Asp Thr Gly Pro	
750 755 760	
aaa ccc act ggc act gaa gca ttg ccc gct gcc acc cag cca cct gtt	2956
Lys Pro Thr Gly Thr Glu Ala Leu Pro Ala Ala Thr Gln Pro Pro Val	
765 770 775	

000120 2522500

cct Pro	cct Pro	cca Pro	gaa Glu	gaa Glu	ccg Pro	gca Ala	gta Val	gcc Ala	cct Pro	gct Ala	gag Glu	ccc Pro	tcc Ser	cca Pro	gtc Val	3004
780785790																
cct Pro	gat Asp	gcc Ala	agt Ser	ggc Gly	cca Pro	cca Pro	tcc Ser	cca Pro	gag Glu	cct Pro	tcc Ser	cat His	cac His	ctg Leu	ccg Pro	3052
795800805																
cac His	ccc Pro	cgg Arg	cta Leu	ctg Leu	tgg Trp	aca Thr	agg Arg	atg Met	aac Asn	aag Lys	aag Lys	ccc Pro	cgg Arg	ctg Leu	ctc Leu	3100
810815820825																
cag Gln	ctc Leu	ccc Pro	aga Arg	cag Gln	agg Arg	atg Met	cca Pro	agg Arg	agc Ser	aga Arg	agt Ser	ctg Leu	agg Arg	ccg Pro	agg Arg	3148
830835840																
aga Arg	tcg Ser	atg Met	tgg Trp	gaa Glu	aag Lys	cca Pro	gag Glu	gag Glu	ccc Pro	gag Glu	gcc Ala	tct Ser	gag Glu	gag Glu	ccc Pro	3196
845850855																
ccg Pro	gag Glu	agt Ser	gta Val	aag Lys	agt Ser	gac Asp	cac His	aag Lys	gag Glu	gag Glu	acc Thr	gag Glu	gaa Glu	gag Glu	cct Pro	3244
860865870																
gaa Glu	gac Asp	aaa Lys	gcc Ala	aag Lys	ggc Gly	aca Thr	gag Glu	gcc Ala	att Ile	gaa Glu	act Thr	gtg Val	tct Ser	gag Glu	gca Ala	3292
875880885																
cca Pro	ctt Leu	aag Lys	gtg Val	gag Glu	gag Glu	gct Ala	ggt Gly	agc Ser	aag Lys	gca Ala	gct Ala	gtg Val	acc Thr	aag Lys	ggg Gly	3340
890895900905																
tcc Ser	agc Ser	tca Ser	ggg Gly	gcc Ala	acc Thr	cag Gln	gac Asp	agt Ser	gac Asp	ttc Phe	agt Ser	gcc Ala	acc Thr	tgc Cys	agt Ser	3388
910915920																
gcc Ala	gat Asp	gag Glu	gtg Val	gac Asp	gaa Glu	ccc Pro	gaa Glu	gga Gly	ggg Gly	gac Asp	aag Lys	ggc Gly	agg Arg	ctg Leu	ctg Leu	3436
925930935																
tca Ser	cca Pro	agg Arg	ccc Pro	agc Ser	ctc Leu	ctc Leu	acc Thr	ccg Pro	gct Ala	gga Gly	gat Asp	ccc Pro	cgg Arg	gcc Ala	agt Ser	3484
940945950																
acc Thr	tcg Ser	ccc Pro	cag Gln	aag Lys	ccg Pro	ctg Leu	gac Asp	ctg Leu	aag Lys	cag Gln	ctg Leu	aag Lys	cag Gln	cga Arg	gca Ala	3532
955960965																
gcc Ala	gcc Ala	atc Ile	ccc Pro	cct Pro	atc Ile	cag Gln	gtc Val	acc Thr	aag Lys	gtc Val	cat His	gag Glu	ccc Pro	ccc Pro	cgg Arg	3580
970975980985																
gag Glu	gac Asp	aca Thr	gta Val	ccc Pro	cca Pro	aag Lys	cca Pro	gtt Val	ccc Pro	cct Pro	gtg Val	cct Pro	cca Pro	ccc Pro	acg Thr	3628
9909951000																
cag Gln	cac His	cta Leu	cag Gln	cca Pro	gag Glu	ggg Gly	gac Asp	gtg Val	tct Ser	cag Gln	cag Gln	tcg Ser	gga Gly	gga Gly	agt Ser	3676
100510101015																

cca	cgt	ggc	aag	tcc	cgc	agc	cca	gtg	cct	cct	gcc	gag	aaa	gag	gca	3724
Pro	Arg	Gly	Lys	Ser	Arg	Ser	Pro	Val	Pro	Pro	Ala	Glu	Lys	Glu	Ala	
		1020					1025					1030				
gag	aaa	ccc	gca	ttc	ttt	ccg	gct	ttc	cca	act	gag	ggc	cca	aag	cta	3772
Glu	Lys	Pro	Ala	Phe	Phe	Pro	Ala	Phe	Pro	Thr	Glu	Gly	Pro	Lys	Leu	
		1035				1040					1045					
ccg	act	gag	ccc	cca	cgc	tgg	tca	tcg	ggc	ctg	ccc	ttc	ccc	atc	cct	3820
Pro	Thr	Glu	Pro	Pro	Arg	Trp	Ser	Ser	Gly	Leu	Pro	Phe	Pro	Ile	Pro	
		1050			1055					1060					1065	
cca	cgg	gag	gtg	atc	aag	act	tcc	cca	cac	gcc	gct	gac	ccc	tct	gcc	3868
Pro	Arg	Glu	Val	Ile	Lys	Thr	Ser	Pro	His	Ala	Ala	Asp	Pro	Ser	Ala	
				1070					1075					1080		
ttc	tcc	tac	aca	ccc	ccc	ggg	cac	ccg	ctg	cct	ctg	ggc	ctc	cac	gat	3916
Phe	Ser	Tyr	Thr	Pro	Pro	Gly	His	Pro	Leu	Pro	Leu	Gly	Leu	His	Asp	
			1085					1090					1095			
agt	gcc	cgg	ccc	gtc	ctg	cca	cgt	ccc	ccc	atc	tct	aac	ccc	cca	ccc	3964
Ser	Ala	Arg	Pro	Val	Leu	Pro	Arg	Pro	Pro	Ile	Ser	Asn	Pro	Pro	Pro	
		1100					1105					1110				
ctc	atc	tcc	tct	gcc	aag	cat	ccc	ggc	gta	ctt	gag	agg	cag	ctg	ggg	4012
Leu	Ile	Ser	Ser	Ala	Lys	His	Pro	Gly	Val	Leu	Glu	Arg	Gln	Leu	Gly	
		1115				1120					1125					
gcc	atc	tcc	cag	cag	ggg	atg	tca	gtc	cag	ctt	cgt	gtg	cct	cac	tca	4060
Ala	Ile	Ser	Gln	Gln	Gly	Met	Ser	Val	Gln	Leu	Arg	Val	Pro	His	Ser	
		1130			1135					1140					1145	
gag	cat	gcc	aag	gcc	ccc	atg	ggc	cct	ctc	acc	atg	ggg	ctg	ccc	ctt	4108
Glu	His	Ala	Lys	Ala	Pro	Met	Gly	Pro	Leu	Thr	Met	Gly	Leu	Pro	Leu	
			1150					1155						1160		
gcc	gtg	gac	cct	aag	aag	ctg	ggg	aca	gca	ctg	ggc	tcc	gcc	acc	agt	4156
Ala	Val	Asp	Pro	Lys	Lys	Leu	Gly	Thr	Ala	Leu	Gly	Ser	Ala	Thr	Ser	
			1165				1170						1175			
gga	agc	atc	acc	aag	ggc	ctc	ccc	agt	acc	cgg	gct	gca	gac	ggc	ccc	4204
Gly	Ser	Ile	Thr	Lys	Gly	Leu	Pro	Ser	Thr	Arg	Ala	Ala	Asp	Gly	Pro	
		1180					1185				1190					
agc	tac	aga	ggc	tct	atc	acc	cac	ggc	acg	ccc	gca	gac	gtc	ctc	tac	4252
Ser	Tyr	Arg	Gly	Ser	Ile	Thr	His	Gly	Thr	Pro	Ala	Asp	Val	Leu	Tyr	
		1195				1200					1205					
aag	ggg	acc	atc	agc	agg	atc	gtc	ggg	gag	gac	agc	cca	agt	cgc	ctt	4300
Lys	Gly	Thr	Ile	Ser	Arg	Ile	Val	Gly	Glu	Asp	Ser	Pro	Ser	Arg		

cag tgc tct aag gag gat gga agg agc agc tcg ggc cca ccc cat gag	4444
Gln Cys Ser Lys Glu Asp Gly Arg Ser Ser Ser Gly Pro Pro His Glu	
1260 1265 1270	
act gcc gcc cct aaa cgc acc tat gac atg atg gag ggc cgt gta ggc	4492
Thr Ala Ala Pro Lys Arg Thr Tyr Asp Met Met Glu Gly Arg Val Gly	
1275 1280 1285	
agg act gtc acc tca gcc agc ata gag gga ctc atg ggc cgc gcc atc	4540
Arg Thr Val Thr Ser Ala Ser Ile Glu Gly Leu Met Gly Arg Ala Ile	
1290 1295 1300 1305	
cct gag cag cac agc ccc cac ctc aag gag cag cat cac atc cga ggc	4588
Pro Glu Gln His Ser Pro His Leu Lys Glu Gln His His Ile Arg Gly	
1310 1315 1320	
tcc atc acg caa ggc atc ccg agg tcc tat gtg gag gcg cag gag gac	4636
Ser Ile Thr Gln Gly Ile Pro Arg Ser Tyr Val Glu Ala Gln Glu Asp	
1325 1330 1335	
tac tta cgg cgg gag gcc aag ctc ttg aag cga gaa ggg aca cca cca	4684
Tyr Leu Arg Arg Glu Ala Lys Leu Leu Lys Arg Glu Gly Thr Pro Pro	
1340 1345 1350	
ccc cca cca cca cct cgg gac ctg act gag acc tac aag ccc cgg ccc	4732
Pro Pro Pro Pro Pro Arg Asp Leu Thr Glu Thr Tyr Lys Pro Arg Pro	
1355 1360 1365	
ctg gac cct ctg ggt ccc ctg aag ctg aag ccg act cac gag ggt gtg	4780
Leu Asp Pro Leu Gly Pro Leu Lys Leu Lys Pro Thr His Glu Gly Val	
1370 1375 1380 1385	
gta gca act gtg aag gag gcg ggc cgc tct atc cat gag atc ccg aga	4828
Val Ala Thr Val Lys Glu Ala Gly Arg Ser Ile His Glu Ile Pro Arg	
1390 1395 1400	
gag gag ctg cgc cgc aca cct gag cta ccc ctg gca cca cgg cct ctg	4876
Glu Glu Leu Arg Arg Thr Pro Glu Leu Pro Leu Ala Pro Arg Pro Leu	
1405 1410 1415	
aag gag ggt tcc atc acc cag ggc acc cca ctc aag tac gac tct ggg	4924
Lys Glu Gly Ser Ile Thr Gln Gly Thr Pro Leu Lys Tyr Asp Ser Gly	
1420 1425 1430	
gca ccc tcc act ggc acc aag aaa cac gac gtg cgc tcc atc atc ggc	4972
Ala Pro Ser Thr Gly Thr Lys Lys His Asp Val Arg Ser Ile Ile Gly	
1435 1440 1445	
agc ccc ggc cgg cct ttc cct gcc ctg cac ccg ctg gac ata atg gct	5020
Ser Pro Gly Arg Pro Phe Pro Ala Leu His Pro Leu Asp Ile Met Ala	
1450 1455 1460 1465	
gac gcc cgg gca ctg gag cgt gcc tgc tat gaa gag agt ctg aag agc	5068
Asp Ala Arg Ala Leu Glu Arg Ala Cys Tyr Glu Glu Ser Leu Lys Ser	
1470 1475 1480	
cgg tca ggg acc agc agt ggt gca ggg ggc tcc atc aca cgt ggg gct	5116
Arg Ser Gly Thr Ser Ser Gly Ala Gly Gly Ser Ile Thr Arg Gly Ala	
1485 1490 1495	

cca	gtc	gtc	gtg	cct	gaa	ctg	ggc	aag	cca	cgg	caa	agc	cca	ctg	act	5164
Pro	Val	Val	Val	Pro	Glu	Leu	Gly	Lys	Pro	Arg	Gln	Ser	Pro	Leu	Thr	
	1500						1505					1510				
tac	gaa	gac	cac	ggg	gca	ccc	ttc	acc	agt	cac	ctg	cca	cgt	ggc	tcc	5212
Tyr	Glu	Asp	His	Gly	Ala	Pro	Phe	Thr	Ser	His	Leu	Pro	Arg	Gly	Ser	
	1515					1520					1525					
cct	gtg	acc	acg	agg	gag	ccc	acg	cca	cgc	ctt	cag	gaa	ggc	agc	ctc	5260
Pro	Val	Thr	Thr	Arg	Glu	Pro	Thr	Pro	Arg	Leu	Gln	Glu	Gly	Ser	Leu	
1530					1535					1540					1545	
cta	tcc	agc	aag	gcg	tcc	cag	gac	cgg	aag	ctg	aca	tct	aca	ccc	cgg	5308
Leu	Ser	Ser	Lys	Ala	Ser	Gln	Asp	Arg	Lys	Leu	Thr	Ser	Thr	Pro	Arg	
				1550					1555					1560		
gag	atc	gcc	aag	tcc	cca	cac	agc	act	gtg	ccc	gag	cac	cac	cct	cac	5356
Glu	Ile	Ala	Lys	Ser	Pro	His	Ser	Thr	Val	Pro	Glu	His	His	Pro	His	
			1565					1570					1575			
ccc	atc	tcc	ccc	tat	gag	cac	ttg	ctc	cgg	ggc	gtg	act	ggg	gtg	gac	5404
Pro	Ile	Ser	Pro	Tyr	Glu	His	Leu	Leu	Arg	Gly	Val	Thr	Gly	Val	Asp	
	1580						1585					1590				
ctg	tac	cgt	ggg	cac	atc	cca	ttg	gcc	ttt	gac	ccc	acc	tcc	ata	ccc	5452
Leu	Tyr	Arg	Gly	His	Ile	Pro	Leu	Ala	Phe	Asp	Pro	Thr	Ser	Ile	Pro	
	1595					1600					1605					
cga	ggg	atc	cct	ctg	gaa	gca	gca	gcc	gca	gcc	tac	tac	ctg	ccc	cgg	5500
Arg	Gly	Ile	Pro	Leu	Glu	Ala	Ala	Ala	Ala	Ala	Tyr	Tyr	Leu	Pro	Arg	
1610					1615					1620					1625	
cac	ttg	gcc	ccc	agc	ccc	acc	tac	cca	cac	ctg	tac	cca	cct	tac	ctc	5548
His	Leu	Ala	Pro	Ser	Pro	Thr	Tyr	Pro	His	Leu	Tyr	Pro	Pro	Tyr	Leu	
				1630					1635					1640		
atc	cgc	ggc	tac	cct	gac	acg	gcg	gcc	ctg	gag	aac	cgc	cag	acc	atc	5596
Ile	Arg	Gly	Tyr	Pro	Asp	Thr	Ala	Ala	Leu	Glu	Asn	Arg	Gln	Thr	Ile	
			1645				1650						1655			
atc	aat	gac	tac	atc	acc	tcg	cag	cag	atg	cac	cac	aac	gct	gcc	tcc	5644
Ile	Asn	Asp	Tyr	Ile	Thr	Ser	Gln	Gln	Met	His	His	Asn	Ala	Ala	Ser	
	1660						1665					1670				
gcc	atg	gcc	cag	cgt	gct	gac	atg	ctg	agg	ggg	ctg	tca	ccg	cga	gag	5692
Ala	Met	Ala	Gln	Arg	Ala	Asp	Met	Leu	Arg	Gly	Leu	Ser	Pro	Arg	Glu	
	1675					1680					1685					
tcc	tcg	ctg	gcc	ctc	aat	tat	gcc	gct	ggc	cca	aga	ggc	att	atc	gac	5740
Ser	Ser	Leu	Ala	Leu	Asn	Tyr	Ala	Ala	Gly	Pro	Arg	Gly	Ile	Ile	Asp	
1690					1695											

cca ccc ttc agc agc cgc cac agt agc tca ccg ctg tcc cca gga ggc	5884
Pro Pro Phe Ser Ser Arg His Ser Ser Ser Pro Leu Ser Pro Gly Gly	
1740 1745 1750	
ccc act cac cta gct aaa cca act gcc aca tct tca tcg gag cgg gaa	5932
Pro Thr His Leu Ala Lys Pro Thr Ala Thr Ser Ser Ser Glu Arg Glu	
1755 1760 1765	
cgg gaa cgt gag cgg gaa cga gac aag tcc atc ctc acg tct acc act	5980
Arg Glu Arg Glu Arg Glu Arg Asp Lys Ser Ile Leu Thr Ser Thr Thr	
1770 1775 1780 1785	
aca gtg gag cat gca ccc atc tgg aga cct ggt acg gag cag agc agc	6028
Thr Val Glu His Ala Pro Ile Trp Arg Pro Gly Thr Glu Gln Ser Ser	
1790 1795 1800	
ggg gct ggg ggc agc agc cgc ccc gcc tcc cac acc cac cag cac tcg	6076
Gly Ala Gly Gly Ser Ser Arg Pro Ala Ser His Thr His Gln His Ser	
1805 1810 1815	
ccc atc tcc ccc cgg acc cag gac gcc ttg cag cag agg ccc agt gtg	6124
Pro Ile Ser Pro Arg Thr Gln Asp Ala Leu Gln Gln Arg Pro Ser Val	
1820 1825 1830	
ctg cac aac acg agc atg aag ggc gtg gtc acc tcc gtg gaa ccc ggc	6172
Leu His Asn Thr Ser Met Lys Gly Val Val Thr Ser Val Glu Pro Gly	
1835 1840 1845	
acg ccc acg gtc ctg agg tgg gcc agg tcc acc tcc acc tct tcg cct	6220
Thr Pro Thr Val Leu Arg Trp Ala Arg Ser Thr Ser Thr Ser Pro	
1850 1855 1860 1865	
gtc cgc cca gct gcc aca ttc cca cct gcc acc cac tgc cca ctt ggt	6268
Val Arg Pro Ala Ala Thr Phe Pro Pro Ala Thr His Cys Pro Leu Gly	
1870 1875 1880	
ggc acc ctt gaa ggg gtc tac cct acc ctc atg gag ccc gtc ctg tta	6316
Gly Thr Leu Glu Gly Val Tyr Pro Thr Leu Met Glu Pro Val Leu Leu	
1885 1890 1895	
ccc aag gag acc tct cgg gtc gcc cgg ccc gag cgg gcc cgg gtg gac	6364
Pro Lys Glu Thr Ser Arg Val Ala Arg Pro Glu Arg Ala Arg Val Asp	
1900 1905 1910	
gct ggc cat gcc ttt ctt acc aaa ccc ccg ggc cgg gag ccc gcc tcc	6412
Ala Gly His Ala Phe Leu Thr Lys Pro Pro Gly Arg Glu Pro Ala Ser	
1915 1920 1925	
tca ccc agc aag agc tcc gag ccc cga tcc cta gca ccc ccc agc tcc	6460
Ser Pro Ser Lys Ser Ser Glu Pro Arg Ser Leu Ala Pro Pro Ser Ser	
1930 1935 1940 1945	
agc cac aca gcc atc gcc cgc acc cca gca aag aac ctt gca ccc cac	6508
Ser His Thr Ala Ile Ala Arg Thr Pro Ala Lys Asn Leu Ala Pro His	
1950 1955 1960	
cat gcc agt ccg gac ccg ccg gcg ccc acc tcg gcc tca gat ctg cac	6556
His Ala Ser Pro Asp Pro Pro Ala Pro Thr Ser Ala Ser Asp Leu His	
1965 1970 1975	

cga gaa aag act caa agt aaa ccc ttt tcc atc cag gaa ttg gaa ctc	6604
Arg Glu Lys Thr Gln Ser Lys Pro Phe Ser Ile Gln Glu Leu Glu Leu	
1980 1985 1990	
cggtctctgtgggttaccacagtgga gctggc tac agc ccc gat ggg gtg	6652
Arg Ser Leu Gly Tyr His Ser Gly Ala Gly Tyr Ser Pro Asp Gly Val	
1995 2000 2005	
gagccc atc agc ccg gtg agc tcc ccc agc ctg acc cac gac aag ggg	6700
Glu Pro Ile Ser Pro Val Ser Ser Pro Ser Leu Thr His Asp Lys Gly	
2010 2015 2020 2025	
ctctcc aaa cct ctg gaa gag cta gag aag agc cac ttg gaa ggg gag	6748
Leu Ser Lys Pro Leu Glu Glu Leu Glu Lys Ser His Leu Glu Gly Glu	
2030 2035 2040	
ctgcgg cac aag cag cca ggc ccc atg aag ctc agc gcg gag gct gcc	6796
Leu Arg His Lys Gln Pro Gly Pro Met Lys Leu Ser Ala Glu Ala Ala	
2045 2050 2055	
catctc cca cat ctg cgg cca ctg ccc gag agc cag ccc tca tcc agc	6844
His Leu Pro His Leu Arg Pro Leu Pro Glu Ser Gln Pro Ser Ser Ser	
2060 2065 2070	
cca ctc ctc cag act gcc cca ggc atc aaa ggt cac cag agg gtg gtc	6892
Pro Leu Leu Gln Thr Ala Pro Gly Ile Lys Gly His Gln Arg Val Val	
2075 2080 2085	
accctg gct cag cac atc agc gag gtc att acg cag gac tac acg cgc	6940
Thr Leu Ala Gln His Ile Ser Glu Val Ile Thr Gln Asp Tyr Thr Arg	
2090 2095 2100 2105	
cac cac ccg cag cag ctc agt ggc ccc ctt ccc gcc cct ctc tac tcc	6988
His His Pro Gln Gln Leu Ser Gly Pro Leu Pro Ala Pro Leu Tyr Ser	
2110 2115 2120	
tttccc gga gcc agc tgc cct gtc ctg gat ctt cgc cgc cca ccc agt	7036
Phe Pro Gly Ala Ser Cys Pro Val Leu Asp Leu Arg Arg Pro Pro Ser	
2125 2130 2135	
gac ctc tac ctc cca ccc ccc gac cat ggc acc cca gcc cgg gga tcc	7084
Asp Leu Tyr Leu Pro Pro Pro Asp His Gly Thr Pro Ala Arg Gly Ser	
2140 2145 2150	
ccc cac agt gaa ggg ggc aaa agg tcc cca gaa ccc agc aaa aca tcg	7132
Pro His Ser Glu Gly Gly Lys Arg Ser Pro Glu Pro Ser Lys Thr Ser	
2155 2160 2165	
gtcctg ggc agc agc gag gat gcc att gag cct gtg tcc cca cca gag	7180
Val Leu Gly Ser Ser Glu Asp Ala Ile Glu Pro Val Ser Pro Pro Glu	
2170 2175 2180 2185	
ggcatg act gag cca gga cat gct cgg agc act gcg tac cca ctg ctg	7228
Gly Met Thr Glu Pro Gly His Ala Arg Ser Thr Ala Tyr Pro Leu Leu	
2190 2195 2200	
tatcga gac ggg gaa cag ggc gag ccc agg atg ggt cta gag tct cca	7276
Tyr Arg Asp Gly Glu Gln Gly Glu Pro Arg Met Gly Leu Glu Ser Pro	
2205 2210 2215	

ggc Gly	aac Asn	acc Thr	agc Ser	cag Gln	ccg Pro	cca Pro	acc Thr	ttc Phe	ttc Phe	agt Ser	aag Lys	ctg Leu	act Thr	gag Glu	agc Ser	7324	
		2220					2225					2230					
aac Asn	tcc Ser	gcc Ala	atg Met	gtg Val	aag Lys	tcg Ser	aag Lys	aag Lys	cag Gln	gag Glu	atc Ile	aac Asn	aag Lys	aaa Lys	ctc Leu	7372	
		2235					2240					2245					
aac Asn	acc Thr	cac His	aac Asn	cgg Arg	aac Asn	gag Glu	cca Pro	gaa Glu	tac Tyr	aat Asn	att Ile	ggc Gly	cag Gln	cct Pro	ggg Gly	7420	
		2250					2255					2260					2265
acg Thr	gaa Glu	atc Ile	ttc Phe	aac Asn	atg Met	ccc Pro	gcc Ala	atc Ile	act Thr	gga Gly	gca Ala	ggc Gly	ctt Leu	atg Met	acc Thr	7468	
		2270					2275					2280					
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Met	Ser	Ala	Ala	Arg	Ser	Glu	His	Glu	Val	Ser	Glu	Ile	Ile	Asp	Gly	
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ttg	tct	gag	cag	gag	aac	ctg	gag	aag	cag	atg	cgc	cag	ctg	gcc	gtg	887
Leu	Ser	Glu	Gln	Glu	Asn	Leu	Glu	Lys	Gln	Met	Arg	Gln	Leu	Ala	Val	
160					165					170					175	
atc	ccg	ccc	atg	ttg	tac	gac	gcg	gac	cag	cag	agg	atc	aag	ttc	atc	935
Ile	Pro	Pro	Met	Leu	Tyr	Asp	Ala	Asp	Gln	Gln	Arg	Ile	Lys	Phe	Ile	
				180					185					190		
aac	atg	aat	gga	ctc	atg	gat	gac	ccc	atg	aag	gtc	tac	aag	gac	cgt	983
Asn	Met	Asn	Gly	Leu	Met	Asp	Asp	Pro	Met	Lys	Val	Tyr	Lys	Asp	Arg	
			195					200					205			
cag	gtt	acc	aac	atg	tgg	agc	gag	cag	gag	agg	gac	acc	ttc	cgt	gag	1031
Gln	Val	Thr	Asn	Met	Trp	Ser	Glu	Gln	Glu	Arg	Asp	Thr	Phe	Arg	Glu	
		210					215					220				
aag	ttt	atg	cag	cac	cct	aag	aac	ttt	ggc	ctg	att	gcc	tca	ttc	ctg	1079
Lys	Phe	Met	Gln	His	Pro	Lys	Asn	Phe	Gly	Leu	Ile	Ala	Ser	Phe	Leu	
	225					230	</									

ggc	aag	agc	cag	cag	cag	cag	cag	cag	caa	caa	cag	cag	cag	cag	cag	1223
Gly	Lys	Ser	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	
			275			280			285							
cag	atg	gca	cgg	agc	agc	cag	gag	gag	aag	gag	gag	aag	gag	aag	gag	1271
Gln	Met	Ala	Arg	Ser	Ser	Gln	Glu	Glu	Lys	Glu	Glu	Lys	Glu	Lys	Glu	
			290			295			300							
aag	gag	gcc	gac	aag	gag	gaa	gag	aag	cag	gat	gcg	gag	aac	gag	aag	1319
Lys	Glu	Ala	Asp	Lys	Glu	Glu	Glu	Lys	Gln	Asp	Ala	Glu	Asn	Glu	Lys	
			305			310			315							
gaa	gaa	ctc	agc	aag	gag	aag	aca	gac	gac	act	tct	ggc	gag	gac	aac	1367
Glu	Glu	Leu	Ser	Lys	Glu	Lys	Thr	Asp	Asp	Thr	Ser	Gly	Glu	Asp	Asn	
			320			325			330			335				
gat	gag	aaa	gag	gcc	gtg	gcc	tcc	aaa	ggc	cgc	aaa	act	gcc	aac	agc	1415
Asp	Glu	Lys	Glu	Ala	Val	Ala	Ser	Lys	Gly	Arg	Lys	Thr	Ala	Asn	Ser	
			340			345			350							
caa	ggc	cgc	cgc	aaa	ggc	cgt	atc	acg	cgc	tcc	atg	gcc	aac	gag	gcc	1463
Gln	Gly	Arg	Arg	Lys	Gly	Arg	Ile	Thr	Arg	Ser	Met	Ala	Asn	Glu	Ala	
			355			360			365							
aac	cat	gag	gag	aca	gcc	acc	cca	cag	caa	agt	tca	gag	ctg	gct	tcc	1511
Asn	His	Glu	Glu	Thr	Ala	Thr	Pro	Gln	Gln	Ser	Ser	Glu	Leu	Ala	Ser	
			370			375			380							
atg	gag	atg	aac	gag	agt	tct	cgc	tgg	act	gag	gaa	gag	atg	gag	aca	1559
Met	Glu	Met	Asn	Glu	Ser	Ser	Arg	Trp	Thr	Glu	Glu	Glu	Met	Glu	Thr	
			385			390			395							
gca	aag	aaa	ggc	ctc	ctg	gaa	cat	ggg	agg	aac	tgg	tca	gcc	att	gcc	1607
Ala	Lys	Lys	Gly	Leu	Leu	Glu	His	Gly	Arg	Asn	Trp	Ser	Ala	Ile	Ala	
			400			405			410			415				
cgc	atg	gtg	ggc	tcc	aag	acc	gtg	tcc	cag	tgt	aag	aac	ttc	tac	ttc	1655
Arg	Met	Val	Gly	Ser	Lys	Thr	Val	Ser	Gln	Cys	Lys	Asn	Phe	Tyr	Phe	
			420			425			430							
aac	tac	aag	aag	agg	cag	aac	ctg	gac	gaa	atc	ctt	cag	cag	cac	aag	1703
Asn	Tyr	Lys	Lys	Arg	Gln	Asn	Leu	Asp	Glu	Ile	Leu	Gln	Gln	His	Lys	
			435			440			445							
cta	aag	atg	gag	aag	gag	agg	aac	gct	cgg	agg	aag	aag	aag	aag	acc	1751
Leu	Lys	Met	Glu	Lys	Glu	Arg	Asn	Ala	Arg	Arg	Lys	Lys	Lys	Lys	Thr	
			450			455			460							
cca	gct	gcg	gcg	agc	gag	gag	aca	gcc	ttc	cca	cct	gcc	gct	gag	gac	1799
Pro	Ala	Ala	Ala	Ser	Glu	Glu	Thr	Ala	Phe	Pro	Pro	Ala	Ala	Glu	Asp	
			465			470			475							
gaa	gag	atg	gaa	gca	tca	ggc	gca	agt	gcc	aat	gag	gaa	gag	ctg	gcg	1847
Glu	Glu	Met	Glu	Ala	Ser	Gly	Ala	Ser	Ala	Asn	Glu	Glu	Glu	Leu	Ala	
			480			485			490			495				
gag	gag	gca	gaa	gcc	tca											

ggg Gly	gag Glu	tgc Cys	agt Ser 515	ggc Gly	cca Pro	gct Ala	gct Ala	gtc Val 520	aac Asn	aac Asn	agc Ser	tct Ser	gat Asp 525	act Thr	gag Glu	1943
agt Ser	gtc Val	cca Pro 530	tcc Ser	ccg Pro	cgt Arg	tca Ser	gaa Glu 535	gcc Ala	acg Thr	aag Lys	gac Asp	act Thr 540	ggg Gly	cct Pro	aaa Lys	1991
ccc Pro	act Thr 545	ggc Gly	act Thr	gaa Glu	gca Ala	ttg Leu 550	ccc Pro	gct Ala	gcc Ala	acc Thr	cag Gln 555	cca Pro	cct Pro	gtt Val	cct Pro	2039
cct Pro 560	cca Pro	gaa Glu	gaa Glu	ccg Pro	gca Ala 565	gta Val	gcc Ala	cct Pro	gct Ala	gag Glu 570	ccc Pro	tcc Ser	cca Pro	gtc Val	cct Pro 575	2087
gat Asp	gcc Ala	agt Ser	ggc Gly 580	cca Pro	cca Pro	tcc Ser	cca Pro	gag Glu 585	cct Pro	tcc Ser	cat His	cac His	ctg Leu	ccg Pro 590	cac His	2135
ccc Pro	cgg Arg	cta Leu	ctg Leu 595	tgg Trp	aca Thr	agg Arg	atg Met	aac Asn 600	aag Lys	aag Lys	ccc Pro	cgg Arg	ctg Leu 605	ctc Leu	cag Gln	2183
ctc Leu	ccc Pro	aga Arg 610	cag Gln	agg Arg	atg Met	cca Pro	agg Arg 615	agc Ser	aga Arg	agt Ser	ctg Leu 620	agg Arg	ccg Pro	agg Arg	aga Arg	2231
tcg Ser	atg Met 625	tgg Trp	gaa Glu	aag Lys	cca Pro	gag Glu 630	gag Glu	ccc Pro	gag Glu	gct Ala	tct Ser 635	gag Glu	aag Lys	ccc Pro	ccg Pro	2279
aag Lys 640	agt Ser	gta Val	aag Lys	agt Ser	gac Asp 645	cac His	aag Lys	aag Lys	gag Glu	acc Thr 650	gag Glu	gaa Glu	gag Glu	cct Pro	gaa Glu 655	2327
gac Asp	aaa Lys	gcc Ala	aag Lys 660	ggc Gly	aca Thr	gag Glu	gcc Ala	att Ile	gaa Glu 665	act Thr	gtg Val	tct Ser	gag Glu 670	gca Ala	cca Pro	2375
ctt Leu	aag Lys	gtg Val	gag Glu 675	aag Lys	gct Ala	ggt Gly	agc Ser	aag Lys 680	gca Ala	gct Ala	gtg Val	acc Thr 685	aag Lys	ggt Gly	tcc Ser	2423
agc Ser	tca Ser	ggg Gly 690	gcc Ala	acc Thr	cag Gln	gac Asp	agt Ser 695	gac Asp	tcc Ser	agt Ser	gcc Ala 700	acc Thr	tgc Cys	agt Ser	gcc Ala	2471
gat Asp	gag Glu 705	gtg Val	gac Asp	gaa Glu	ccc Pro	gaa Glu 710	gga Gly	ggt Gly	gac Asp	aag Lys	ggc Gly 715	agg Arg	ctg Leu	ctg Leu	tca Ser	2519
cca Pro 720	agg Arg	ccc Pro	agc Ser	ctc Leu	ctc Leu 725	acc Thr	ccg Pro	gct Ala	gga Gly	gat Asp 730	ccc Pro	cgg Arg	gcc Ala	agt Ser	acc Thr 735	2567
tcg Ser	ccc Pro	cag Gln	aag Lys	ccg Pro 740	ctg Leu	gac Asp	ctg Leu	aag Lys 745	cag Gln	ctg Leu	aag Lys	cag Gln	cga Arg	gca Ala 750	gcc Ala	2615

gcc Ala	atc Ile	ccc Pro	cct Pro	atc Ile	gtc Val	acc Thr	aag Lys	gtc Val	cat His	gag Glu	ccc Pro	ccc Pro	cgg Arg	gag Glu	gac Asp	2663
755760765																
aca Thr	gta Val	ccc Pro	cca Pro	aag Lys	cca Pro	gtt Val	ccc Pro	cct Pro	gtg Val	cct Pro	cca Pro	ccc Pro	acg Thr	cag Gln	cac His	2711
770775780																
cta Leu	cag Gln	cca Pro	gag Glu	ggg Gly	gac Asp	gtg Val	tct Ser	cag Gln	cag Gln	tcg Ser	gga Gly	gga Gly	agt Ser	cca Pro	cgt Arg	2759
785790795																
ggc Gly	aag Lys	tcc Ser	cgc Arg	agc Ser	cca Pro	gtg Val	cct Pro	cct Pro	gcc Ala	gag Glu	aaa Lys	gag Glu	gca Ala	gag Glu	aaa Lys	2807
800805810815																
ccc Pro	gca Ala	ttc Phe	ttt Phe	ccg Pro	gct Ala	ttc Phe	cca Pro	act Thr	gag Glu	ggc Gly	cca Pro	aag Lys	cta Leu	ccg Pro	act Thr	2855
820825830																
gag Glu	ccc Pro	cca Pro	cgc Arg	tgg Trp	tca Ser	tcg Ser	ggc Gly	ctg Leu	ccc Pro	ttc Phe	ccc Pro	atc Ile	cct Pro	cca Pro	cgg Arg	2903
835840845																
gag Glu	gtg Val	atc Ile	aag Lys	act Thr	tcc Ser	cca Pro	cac His	gcc Ala	gct Ala	gac Asp	ccc Pro	tct Ser	gcc Ala	ttc Phe	tcc Ser	2951
850855860																
tac Tyr	aca Thr	ccc Pro	ccc Pro	ggg Gly	cac His	ccg Pro	ctg Leu	cct Pro	ctg Leu	ggc Gly	ctc Leu	cac His	gat Asp	agt Ser	gcc Ala	2999
865870875																
cgg Arg	ccc Pro	gtc Val	ctg Leu	cca Pro	cgt Arg	ccc Pro	ccc Pro	atc Ile	tct Ser	aac Asn	ccc Pro	cca Pro	ccc Pro	ctc Leu	atc Ile	3047
880885890895																
tcc Ser	tct Ser	gcc Ala	aag Lys	cat His	ccc Pro	ggc Gly	gta Val	ctt Leu	gag Glu	agg Arg	cag Gln	ctg Leu	ggg Gly	gcc Ala	atc Ile	3095
900905910																
tcc Ser	cag Gln	cag Gln	ggg Gly	atg Met	tca Ser	gtc Val	cag Gln	ctt Leu	cgt Arg	gtg Val	cct Pro	cac His	tca Ser	gag Glu	cat His	3143
915920925																
gcc Ala	aag Lys	gcc Ala	ccc Pro	atg Met	ggc Gly	cct Pro	ctc Leu	acc Thr	atg Met	ggg Gly	ctg Leu	ccc Pro	ctt Leu	gcc Ala	gtg Val	3191
930935940																
gac Asp	cct Pro	aag Lys	aag Lys	ctg Leu	ggg Gly	aca Thr	gca Ala	ctg Leu	ggc Gly	tcc Ser	gcc Ala	acc Thr	agt Ser	gga Gly	agc Ser	3239
945950955																
atc Ile	acc Thr	aag Lys	ggc Gly	ctc Leu	ccc Pro	agt Ser	acc Thr	cgg Arg	gct Ala	gca Ala	gac Asp	ggc Gly	ccc Pro	agc Ser	tac Tyr	3287
960965970975																
aga Arg	ggc Gly	tct Ser	atc Ile	acc Thr	cac His	ggc Gly	acg Thr	ccc Pro	gca Ala	gac Asp	gtc Val	ctc Leu	tac Tyr	aag Lys	ggg Gly	3335
980985990																

acc	atc	agc	agg	atc	gtc	ggt	gag	gac	agc	cca	agt	cgc	ctt	gac	cgg	3383
Thr	Ile	Ser	Arg	Ile	Val	Gly	Glu	Asp	Ser	Pro	Ser	Arg	Leu	Asp	Arg	
			995					1000					1005			
gca	cga	gag	gac	acc	ctg	ccc	aag	ggc	cat	gtc	atc	tat	gag	ggc	aag	3431
Ala	Arg	Glu	Asp	Thr	Leu	Pro	Lys	Gly	His	Val	Ile	Tyr	Glu	Gly	Lys	
			1010				1015					1020				
aaa	ggc	cac	gtc	cta	tcc	tat	gaa	ggt	ggt	atg	tcc	gtg	tca	cag	tgc	3479
Lys	Gly	His	Val	Leu	Ser	Tyr	Glu	Gly	Gly	Met	Ser	Val	Ser	Gln	Cys	
			1025			1030					1035					
tct	aag	gag	gat	gga	agg	agc	agc	tcg	ggc	cca	ccc	cat	gag	act	gcc	3527
Ser	Lys	Glu	Asp	Gly	Arg	Ser	Ser	Ser	Gly	Pro	Pro	His	Glu	Thr	Ala	
					1045					1050					1055	
gcc	cct	aaa	cgc	acc	tat	gac	atg	atg	gag	ggc	cgt	gta	ggc	agg	act	3575
Ala	Pro	Lys	Arg	Thr	Tyr	Asp	Met	Met	Glu	Gly	Arg	Val	Gly	Arg	Thr	
				1060				1065						1070		
gtc	acc	tca	gcc	agc	ata	gag	gga	ctc	atg	ggc	cgc	gcc	atc	cct	gag	3623
Val	Thr	Ser	Ala	Ser	Ile	Glu	Gly	Leu	Met	Gly	Arg	Ala	Ile	Pro	Glu	
			1075				1080						1085			
cag	cac	agc	ccc	cac	ctc	aag	gag	cag	cat	cac	atc	cga	ggc	tcc	atc	3671
Gln	His	Ser	Pro	His	Leu	Lys	Glu	Gln	His	His	Ile	Arg	Gly	Ser	Ile	
			1090			1095						1100				
acg	caa	ggc	atc	ccg	agg	tcc	tat	gtg	gag	gcg	cag	gag	gac	tac	tta	3719
Thr	Gln	Gly	Ile	Pro	Arg	Ser	Tyr	Val	Glu	Ala	Gln	Glu	Asp	Tyr	Leu	
			1105			1110					1115					
cgg	cgg	gag	gcc	aag	ctc	ttg	aag	cga	gaa	ggg	aca	cca	cca	ccc	cca	3767
Arg	Arg	Glu	Ala	Lys	Leu	Leu	Lys	Arg	Glu	Gly	Thr	Pro	Pro	Pro	Pro	
			1120		1125					1130					1135	
cca	cca	cct	cgg	gac	ctg	act	gag	acc	tac	aag	ccc	cgg	ccc	ctg	gac	3815
Pro	Pro	Pro	Arg	Asp	Leu	Thr	Glu	Thr	Tyr	Lys	Pro	Arg	Pro	Leu	Asp	
				1140				1145						1150		
cct	ctg	ggt	ccc	ctg	aag	ctg	aag	ccg	act	cac	gag	ggt	gtg	gta	gca	3863
Pro	Leu	Gly	Pro	Leu	Lys	Leu	Lys	Pro	Thr	His	Glu	Gly	Val	Val	Ala	
			1155				1160						1165			
act	gtg	aag	gag	gcg	ggc	cgc	tct	atc	cat	gag	atc	ccg	aga	gag	gag	3911
Thr	Val	Lys	Glu	Ala	Gly	Arg	Ser	Ile	His	Glu	Ile	Pro	Arg	Glu	Glu	
			1170			1175						1180				
ctg	cgc	cgc	aca	cct	gag	cta	ccc	ctg	gca	cca	cgg	cct	ctg	aag	gag	3959
Leu	Arg	Arg	Thr	Pro	Glu	Leu	Pro	Leu	Ala	Pro	Arg	Pro	Leu	Lys	Glu	
			1185			1190					1195					
ggt	tcc	atc	acc	cag	ggc	acc	cca									

ggc cgg cct ttc cct gcc ctg cac ccg ctg gac ata atg gct gac gcc Gly Arg Pro Phe Pro Ala Leu His Pro Leu Asp Ile Met Ala Asp Ala 1235 1240 1245	4103
cgg gca ctg gag cgt gcc tgc tat gaa gag agt ctg aag agc cgg tca Arg Ala Leu Glu Arg Ala Cys Tyr Glu Glu Ser Leu Lys Ser Arg Ser 1250 1255 1260	4151
ggg acc agc agt ggt gca ggg ggc tcc atc aca cgt ggg gct cca gtc Gly Thr Ser Ser Gly Ala Gly Gly Ser Ile Thr Arg Gly Ala Pro Val 1265 1270 1275	4199
gtc gtg cct gaa ctg ggc aag cca cgg caa agc cca ctg act tac gaa Val Val Pro Glu Leu Gly Lys Pro Arg Gln Ser Pro Leu Thr Tyr Glu 1280 1285 1290 1295	4247
gac cac ggg gca ccc ttc acc agt cac ctg cca cgt ggc tcc cct gtg Asp His Gly Ala Pro Phe Thr Ser His Leu Pro Arg Gly Ser Pro Val 1300 1305 1310	4295
acc acg agg gag ccc acg cca cgc ctt cag gaa ggc agc ctc cta tcc Thr Thr Arg Glu Pro Thr Pro Arg Leu Gln Glu Gly Ser Leu Leu Ser 1315 1320 1325	4343
agc aag gcg tcc cag gac cgg aag ctg aca tct aca ccc cgg gag atc Ser Lys Ala Ser Gln Asp Arg Lys Leu Thr Ser Thr Pro Arg Glu Ile 1330 1335 1340	4391
gcc aag tcc cca cac agc act gtg ccc gag cac cac cct cac ccc atc Ala Lys Ser Pro His Ser Thr Val Pro Glu His His Pro His Pro Ile 1345 1350 1355	4439
tcc ccc tat gag cac ttg ctc cgg ggc gtg act ggt gtg gac ctg tac Ser Pro Tyr Glu His Leu Leu Arg Gly Val Thr Gly Val Asp Leu Tyr 1360 1365 1370 1375	4487
cgt ggt cac atc cca ttg gcc ttt gac ccc acc tcc ata ccc cga ggg Arg Gly His Ile Pro Leu Ala Phe Asp Pro Thr Ser Ile Pro Arg Gly 1380 1385 1390	4535
atc cct ctg gaa gca gca gcc gca gcc tac tac ctg ccc cgg cac ttg Ile Pro Leu Glu Ala Ala Ala Ala Ala Tyr Tyr Leu Pro Arg His Leu 1395 1400 1405	4583
gcc ccc agc ccc acc tac cca cac ctg tac cca cct tac ctc atc cgc Ala Pro Ser Pro Thr Tyr Pro His Leu Tyr Pro Pro Tyr Leu Ile Arg 1410 1415 1420	4631
ggc tac cct gac acg gcg gcc ctg gag aac cgc cag acc atc atc aat Gly Tyr Pro Asp Thr Ala Ala Leu Glu Asn Arg Gln Thr Ile Ile Asn 1425 1430 1435	4679
gac tac atc acc tcg cag cag atg cac cac aac gct gcc tcc gcc atg Asp Tyr Ile Thr Ser Gln Gln Met His His Asn Ala Ala Ser Ala Met 1440 1445 1450 1455	4727
gcc cag cgt gct gac atg ctg agg ggt ctg tca ccg cga gag tcc tcg Ala Gln Arg Ala Asp Met Leu Arg Gly Leu Ser Pro Arg Glu Ser Ser 1460 1465 1470	4775

ctg	gcc	ctc	aat	tat	gcc	gct	ggc	cca	aga	ggc	att	atc	gac	ctg	tcc	4823
Leu	Ala	Leu	Asn	Tyr	Ala	Ala	Gly	Pro	Arg	Gly	Ile	Ile	Asp	Leu	Ser	
			1475					1480					1485			
caa	gtg	cca	cac	ctg	ccc	gtg	ctg	gtg	cca	cca	acg	cca	ggc	acc	cct	4871
Gln	Val	Pro	His	Leu	Pro	Val	Leu	Val	Pro	Pro	Thr	Pro	Gly	Thr	Pro	
			1490					1495					1500			
gcc	acc	gcc	atc	gac	cgc	ctt	gcc	tac	ctc	ccc	act	gcg	ccc	cca	ccc	4919
Ala	Thr	Ala	Ile	Asp	Arg	Leu	Ala	Tyr	Leu	Pro	Thr	Ala	Pro	Pro	Pro	
			1505				1510					1515				
ttc	agc	agc	cgc	cac	agt	agc	tca	ccg	ctg	tcc	cca	gga	ggc	ccc	act	4967
Phe	Ser	Ser	Arg	His	Ser	Ser	Ser	Pro	Leu	Ser	Pro	Gly	Gly	Pro	Thr	
1520					1525					1530					1535	
cac	cta	gct	aaa	cca	act	gcc	aca	tct	tca	tcg	gag	cgg	gaa	cgg	gaa	5015
His	Leu	Ala	Lys	Pro	Thr	Ala	Thr	Ser	Ser	Ser	Glu	Arg	Glu	Arg	Glu	
			1540					1545					1550			
cgt	gag	cgg	gaa	cga	gac	aag	tcc	atc	ctc	acg	tct	acc	act	aca	gtg	5063
Arg	Glu	Arg	Glu	Arg	Asp	Lys	Ser	Ile	Leu	Thr	Ser	Thr	Thr	Thr	Val	
			1555					1560					1565			
gag	cat	gca	ccc	atc	tgg	aga	cct	ggt	acg	gag	cag	agc	agc	ggg	gct	5111
Glu	His	Ala	Pro	Ile	Trp	Arg	Pro	Gly	Thr	Glu	Gln	Ser	Ser	Gly	Ala	
			1570				1575					1580				
ggg	ggc	agc	agc	cgc	ccc	gcc	tcc	cac	acc	cac	cag	cac	tcg	ccc	atc	5159
Gly	Gly	Ser	Ser	Arg	Pro	Ala	Ser	His	Thr	His	Gln	His	Ser	Pro	Ile	
			1585				1590					1595				
tcc	ccc	cgg	acc	cag	gac	gcc	ttg	cag	cag	agg	ccc	agt	gtg	ctg	cac	5207
Ser	Pro	Arg	Thr	Gln	Asp	Ala	Leu	Gln	Gln	Arg	Pro	Ser	Val	Leu	His	
1600					1605					1610					1615	
aac	acg	agc	atg	aag	ggc	gtg	gtc	acc	tcc	gtg	gaa	ccc	ggc	acg	ccc	5255
Asn	Thr	Ser	Met	Lys	Gly	Val	Val	Thr	Ser	Val	Glu	Pro	Gly	Thr	Pro	
			1620					1625					1630			
acg	gtc	ctg	agg	tgg	gcc	agg	tcc	acc	tcc	acc	tct	tcg	cct	gtc	cgc	5303
Thr	Val	Leu	Arg	Trp	Ala	Arg	Ser	Thr	Ser	Thr	Ser	Ser	Pro	Val	Arg	
			1635				1640						1645			
cca	gct	gcc	aca	ttc	cca	cct	gcc	acc	cac	tgc	cca	ctt	ggt	ggc	acc	5351
Pro	Ala	Ala	Thr	Phe	Pro	Pro	Ala	Thr	His	Cys	Pro	Leu	Gly	Gly	Thr	
			1650				1655					1660				
ctt	gaa	ggg	gtc	tac	cct	acc	ctc	atg	gag	ccc	gtc	ctg	tta	ccc	aag	5399
Leu	Glu	Gly	Val	Tyr	Pro	Thr	Leu	Met	Glu	Pro	Val	Leu	Leu	Pro		

agc aag agc tcc gag ccc cga tcc cta gca ccc ccc agc tcc agc cac	5543
Ser Lys Ser Ser Glu Pro Arg Ser Leu Ala Pro Pro Ser Ser Ser His	
1715 1720 1725	
aca gcc atc gcc cgc acc cca gca aag aac ctt gca ccc cac cat gcc	5591
Thr Ala Ile Ala Arg Thr Pro Ala Lys Asn Leu Ala Pro His His Ala	
1730 1735 1740	
agt ccg gac ccg ccg gcg ccc acc tcg gcc tca gat ctg cac cga gaa	5639
Ser Pro Asp Pro Pro Ala Pro Thr Ser Ala Ser Asp Leu His Arg Glu	
1745 1750 1755	
aag act caa agt aaa ccc ttt tcc atc cag gaa ttg gaa ctc cgt tct	5687
Lys Thr Gln Ser Lys Pro Phe Ser Ile Gln Glu Leu Glu Leu Arg Ser	
1760 1765 1770 1775	
ctg ggt tac cac agt gga gct ggc tac agc ccc gat ggg gtg gag ccc	5735
Leu Gly Tyr His Ser Gly Ala Gly Tyr Ser Pro Asp Gly Val Glu Pro	
1780 1785 1790	
atc agc ccg gtg agc tcc ccc agc ctg acc cac gac aag ggg ctc tcc	5783
Ile Ser Pro Val Ser Ser Pro Ser Leu Thr His Asp Lys Gly Leu Ser	
1795 1800 1805	
aaa cct ctg gaa gag cta gag aag agc cac ttg gaa ggg gag ctg cgg	5831
Lys Pro Leu Glu Glu Leu Glu Lys Ser His Leu Glu Gly Glu Leu Arg	
1810 1815 1820	
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His Lys Gln Pro Gly Pro Met Lys Leu Ser Ala Glu Ala Ala His Leu	
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Pro His Leu Arg Pro Leu Pro Glu Ser Gln Pro Ser Ser Ser Pro Leu	
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Leu Gln Thr Ala Pro Gly Ile Lys Gly His Gln Arg Val Val Thr Leu	
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Ala Gln His Ile Ser Glu Val Ile Thr Gln Asp Tyr Thr Arg His His	
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Pro Gln Gln Leu Ser Gly Pro Leu Pro Ala Pro Leu Tyr Ser Phe Pro	
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Gly Ala Ser Cys Pro Val Leu Asp Leu Arg Arg Pro Pro Ser Asp Leu	
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Tyr Leu Pro Pro Pro Asp His Gly Thr Pro Ala Arg Gly Ser Pro His	
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Ser Glu Gly Gly Lys Arg Ser Pro Glu Pro Ser Lys Thr Ser Val Leu	
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Gln Arg Tyr Asp Gln Leu Met Glu Ala Trp Glu Lys Lys Val Glu Arg	
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Pro	Gly	Arg	Pro	Gly	Ser	His	Gly	Tyr	Val	Arg	Ser	Pro	Ser	Pro	Ser	
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Ile	Thr	Arg	Gln	Ile	Ala	Ser	Asp	Lys	Asp	Ala	Arg	Glu	Arg	Gly	Ser					
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Gly	S															

2300

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			20					25					30			
Arg	His	Gln	Gln	Glu	Phe	Ala	Val	Pro	Asp	Tyr	Arg	Ser	Ser	His	Leu	
		35					40					45				
Glu	Val	Ser	Gln	Ala	Ser	Gln	Leu	Leu	Gln	Gln	Gln	Gln	Gln	Gln	Gln	
	50					55					60					
Leu	Arg	Arg	Arg	Pro	Ser	Leu	Leu	Ser	Glu	Phe	His	Pro	Gly	Ser	Asp	

65	Arg	Pro	Gln	Glu	Arg	Arg	Thr	Ser	Tyr	Glu	Pro	Phe	His	Pro	Gly	Pro
					85					90					95	
Ser	Pro	Val	Asp	His	Asp	Ser	Leu	Glu	Ser	Lys	Arg	Pro	Arg	Leu	Glu	
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Gln	Val	Ser	Asp	Ser	His	Phe	Gln	Arg	Val	Ser	Ala	Ala	Val	Leu	Pro	
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Leu	Val	His	Pro	Leu	Pro	Glu	Gly	Leu	Arg	Ala	Ser	Ala	Asp	Ala	Lys	
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Lys	Asp	Pro	Ala	Phe	Gly	Gly	Lys	His	Glu	Ala	Pro	Ser	Ser	Pro	Ile	
145					150				155						160	
Ser	Gly	Gln	Pro	Cys	Gly	Asp	Asp	Gln	Asn	Ala	Ser	Pro	Ser	Lys	Leu	
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Ser	Lys	Glu	Glu	Leu	Ile	Gln	Ser	Met	Asp	Arg	Val	Asp	Arg	Glu	Ile	
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Ala	Lys	Val	Glu	Gln	Gln	Ile	Leu	Lys	Leu	Lys	Lys	Lys	Gln	Gln	Gln	
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Asp	Glu	Asn	Arg	Lys	Lys	Ala	Glu	Glu	Ala	His	Lys	Ile	Phe	Glu	Gly	
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Lys	Val	Tyr	His	Glu	Asn	Ile	Lys	Thr	Asn	Gln	Val	Met	Arg	Lys	Lys	
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Arg	Glu	Gln	Gln	Glu	Arg	Phe	Gln	Arg	Val	Gly	Gln	Arg	Gly	Ala	Gly	
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Leu	Ser	Ala	Thr	Ile	Ala	Arg	Ser	Glu	His	Glu	Ile	Ser	Glu	Ile	Ile	
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Asp	Gly	Leu	Ser	Glu	Gln	Asn	Asn	Glu	Lys	Gln	Met	Arg	Gln	Leu		
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Ser	Val	Ile	Pro	Pro	Met	Met	Phe	Asp	Ala	Glu	Gln	Arg	Arg	Val	Lys	
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Thr	Lys	Lys	Asn	Glu	Asn	Tyr	Lys	Ala	Leu	Val	Arg	Arg	Asn	Tyr	Gly	
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Lys	Arg	Arg	Gly	Arg	Asn	Gln	Gln	Ile	Ala	Arg	Pro	Ser	Gln	Glu	Glu	
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Lys	Val	Glu	Glu	Lys	Glu	Glu	Asp	Lys	Ala	Glu	Lys	Thr	Glu	Lys	Lys	
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Glu	Glu	Glu	Lys	Lys	Asp	Glu	Glu	Glu	Lys	Asp	Glu	Lys	Glu	Asp	Ser	
			530			535				540						
Lys	Glu	Asn	Thr	Lys	Glu	Lys	Asp	Lys	Ile	Asp	Gly	Thr	Ala	Glu	Glu	

545						550						555						560
Thr	Glu	Glu	Arg	Glu	Gln	Ala	Thr	Pro	Arg	Gly	Arg	Lys	Thr	Ala	Asn			
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Ala	Ala	Ala	Ala	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Thr	Glu	Glu	Pro	Pro			
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Ser Val Glu Gly Asn Ile Lys Gln Gly Met Ser Met Arg Glu Ser Pro						
	1250		1255		1260	
Val Ser Ala Pro Leu Glu Gly Leu Ile Cys Arg Ala Leu Pro Arg Gly						
	1265		1270		1275	1280
Ser Pro His Ser Asp Leu Lys Glu Arg Thr Val Leu Ser Gly Ser Ile						
	1285		1290		1295	
Met Gln Gly Thr Pro Arg Ala Thr Thr Glu Ser Phe Glu Asp Gly Leu						
	1300		1305		1310	
Lys Tyr Pro Lys Gln Ile Lys Arg Glu Ser Pro Pro Ile Arg Ala Phe						
	1315		1320		1325	
Glu Gly Ala Ile Thr Lys Gly Lys Pro Tyr Asp Gly Ile Thr Thr Ile						
	1330		1335		1340	
Lys Glu Met Gly Arg Ser Ile His Glu Ile Pro Arg Gln Asp Ile Leu						
	1345		1350		1355	1360
Thr Gln Glu Ser Arg Lys Thr Pro Glu Val Val Gln Ser Thr Arg Pro						
	1365		1370		1375	
Ile Ile Glu Gly Ser Ile Ser Gln Gly Thr Pro Ile Lys Phe Asp Asn						
	1380		1385		1390	
Asn Ser Gly Gln Ser Ala Ile Lys His Asn Val Lys Ser Leu Ile Thr						
	1395		1400		1405	
Gly Pro Ser Lys Leu Ser Arg Gly Met Pro Pro Leu Glu Ile Val Pro						
	1410		1415		1420	
Glu Asn Ile Lys Val Val Glu Arg Gly Lys Tyr Glu Asp Val Lys Ala						
	1425		1430		1435	1440
Gly Glu Thr Val Arg Ser Arg His Thr Ser Val Val Ser Ser Gly Pro						
	1445		1450		1455	
Ser Val Leu Arg Ser Thr Leu His Glu Ala Pro Lys Ala Gln Leu Ser						
	1460		1465		1470	
Pro Gly Ile Tyr Asp Asp Thr Ser Ala Arg Arg Thr Pro Val Ser Tyr						
	1475		1480		1485	
Gln Asn Thr Met Ser Arg Gly Ser Pro Met Met Asn Arg Thr Ser Asp						
	1490		1495		1500	
Val Thr Ile Pro Pro Asn Lys Ser Thr Asn His Glu Arg Lys Ser Thr						

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Questions
Answers
Exercises
Problems
References
Index

1985				1990				1995				2000			
Gln	Ala	Glu	Asn	Asp	Pro	Thr	Arg	Gln	Tyr	Glu	Gly	Pro	Leu	His	His
2005								2010				2015			
Tyr	Arg	Pro	Gln	Gln	Glu	Ser	Pro	Ser	Pro	Gln	Gln	Gln	Leu	Pro	Pro
2020								2025				2030			
Ser	Ser	Gln	Ala	Glu	Gly	Met	Gly	Gln	Val	Pro	Arg	Thr	His	Arg	Leu
2035								2040				2045			
Ile	Thr	Leu	Ala	Asp	His	Ile	Cys	Gln	Ile	Ile	Thr	Gln	Asp	Phe	Ala
2050								2055				2060			
Arg	Asn	Gln	Val	Ser	Ser	Gln	Thr	Pro	Gln	Gln	Pro	Pro	Thr	Ser	Thr
2065								2070				2075			
Phe	Gln	Asn	Ser	Pro	Ser	Ala	Leu	Val	Ser	Thr	Pro	Val	Arg	Thr	Lys
2085								2090				2095			
Thr	Ser	Asn	Arg	Tyr	Ser	Pro	Glu	Ser	Gln	Ala	Gln	Ser	Val	His	His
2100								2105				2110			
Gln	Arg	Pro	Gly	Ser	Arg	Val	Ser	Pro	Glu	Asn	Leu	Val	Asp	Lys	Ser
2115								2120				2125			
Arg	Gly	Ser	Arg	Pro	Gly	Lys	Ser	Pro	Glu	Arg	Ser	His	Val	Ser	Ser
2130								2135				2140			
Glu	Pro	Tyr	Glu	Pro	Ile	Ser	Pro	Pro	Gln	Val	Pro	Val	Val	His	Glu
2145								2150				2155			
Lys	Gln	Asp	Ser	Leu	Leu	Leu	Leu	Ser	Gln	Arg	Gly	Ala	Glu	Pro	Ala
2165								2170				2175			
Glu	Gln	Arg	Asn	Asp	Ala	Arg	Ser	Pro	Gly	Ser	Ile	Ser	Tyr	Leu	Pro
2180								2185				2190			
Ser	Phe	Phe	Thr	Lys	Leu	Glu	Asn	Thr	Ser	Pro	Met	Val	Lys	Ser	Lys
2195								2200				2205			
Lys	Gln	Glu	Ile	Phe	Arg	Lys	Leu	Asn	Ser	Ser	Gly	Gly	Gly	Asp	Ser
2210								2215				2220			
Asp	Met	Ala	Ala	Ala	Gln	Pro	Gly	Thr	Glu	Ile	Phe	Asn	Leu	Pro	Ala
2225								2230				2235			
Val	Thr	Thr	Ser	Gly	Ser	Val	Ser	Ser	Arg	Gly	His	Ser	Phe	Ala	Asp
2245								2250				2255			
Pro	Ala	Ser	Asn	Leu	Gly	Leu	Glu	Asp	Ile	Ile	Arg	Lys	Ala	Leu	Met
2260								2265				2270			
Gly	Ser	Phe	Asp	Asp	Lys	Val	Glu	Asp	His	Gly	Val	Val	Met	Ser	Gln
2275								2280				2285			
Pro	Met	Gly	Val	Val	Pro	Gly	Thr	Ala	Asn	Thr	Ser	Val	Val	Thr	Ser
2290								2295				2300			
Gly	Glu	Thr	Arg	Arg	Glu	Glu	Gly	Asp	Pro	Ser	Pro	His	Ser	Gly	Gly
2305								2310				2315			
Val	Cys	Lys	Pro	Lys	Leu	Ile	Ser	Lys	Ser	Asn	Ser	Arg	Lys	Ser	Lys
2325								2330				2335			
Ser	Pro	Ile	Pro	Gly	Gln	Gly	Tyr	Leu	Gly	Thr	Glu	Arg	Pro	Ser	Ser
2340								2345				2350			
Val	Ser	Ser	Val	His	Ser	Glu	Gly	Asp	Tyr	His	Arg	Gln	Thr	Pro	Gly
2355								2360				2365			
Trp	Ala	Trp	Glu	Asp	Arg	Pro	Ser	Ser	Thr	Gly	Ser	Thr	Gln	Phe	Pro
2370								2375				2380			
Tyr	Asn	Pro	Leu	Thr	Met	Arg	Met	Leu	Ser	Ser	Thr	Pro	Pro		